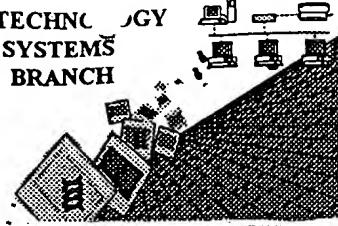


5/17

**BIOTECHNOLOGY  
SYSTEMS  
BRANCH**



**RAW SEQUENCE LISTING  
ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/909,566 B  
Source: OIPE  
Date Processed by STIC: 5-22-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Does Not Comply  
Corrected Diskette Needed

See Page 6



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002

TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt

Output Set: N:\CRF3\05222002\I909566B.raw

3 <110> APPLICANT: Cahoon, Edgar B  
 5 <120> TITLE OF INVENTION: A Cytochrome P450 enzyme associated with the synthesis of  
 delta-  
 6 12-epoxy fatty acids  
 8 <130> FILE REFERENCE: BB1465 US NA  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/909,566B  
 C--> 11 <141> CURRENT FILING DATE: 2002-05-10  
 13 <150> PRIOR APPLICATION NUMBER: 60/219833  
 14 <151> PRIOR FILING DATE: 2000-07-21  
 16 <160> NUMBER OF SEQ ID NOS: 7  
 18 <170> SOFTWARE: Microsoft Office 97  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 1733  
 22 <212> TYPE: DNA  
 23 <213> ORGANISM: Euphorbia lagascae  
 25 <400> SEQUENCE: 1  
 26 gcataaaagg aaaatggagc agaaaaatct ctctttccg agcattttaa taagtttct 60  
 27 gcttgttta atcttagtag tagtcatgag gttgtgaaag aaacagaatc caccccaagg 120  
 28 gccatggaag tttcctatca taggtaatct tcctcattta ttactcattt ctgatctagg 180  
 29 ccatgaacgt ttttagagcct tggctcaaattt ttatggacct gttatggatc ttcaaattgg 240  
 30 ccaagttca gctgttgtca tttcttcagc tgaaggagcc aaagaggtta tgaaaaactca 300  
 31 ggctgatgcc ttgcggcaac gccctatcgt cttggacgc cagattgtgt tttataatcg 360  
 32 gaaagatgtc ttgtttgctt catatggaga tcactggagg cagatgaaga aaatttggat 420  
 33 acttgaattt ctgagtgcca aaaaagttca atcctccagg ttaatccgag aggaagaaat 480  
 34 ggaggatgcc atcacattcc tccgttcgaa agccggatct ccggtaata ttacaaagat 540  
 35 catttatggc attataattt cgatcatgat aagaacatcc gttggtaattt gtaagcaaaa 600  
 36 agaaaagattt ctgagtggtt ccgtgcgtt caatggggca ggcacggatt ttggcaccgc 660  
 37 agacgctttt ccgacgtgga aattacttca ctatatcattt ggagctgagt caaaacccag 720  
 38 gcgtttgcat caggagattt acgatataact tgaagagattt cttatgaaac acaaagccaa 780  
 39 taagcctttt gaagcggata acttaatggta tggcttattt aatcttcaaa aaaatggaaa 840  
 40 cgttccagtgc ccagtgcaca acgaaagcat caaagcatcc gttttgc当地 tggacttgc 900  
 41 cgggagcgaa acaacttcga aagctacaga atggtaatg gcagagctga tgaaaaatcc 960  
 42 aactgaacta agaaaagcac aagaagaatg tagacaagta ttgggtgaaa tggggaaaatg 1020  
 43 tggatgtatca agatttcatg atttggaaattt cttcaagtta gtggtaaag aaactctaag 1080  
 44 attacatccct ccgggttgttct tgattccgg gggatgttgc gaaacaacac gaattgtatgg 1140  
 45 atatggaaattt catccgaaca ctgcattgt tggatgtct tggcgatag gaagagatcc 1200  
 46 taatacttgg tcggaaacctg gaaagtttaa cccagaaaagg tttaaagattt gtgcatttgc 1260  
 47 ttataaaaggcc acgacatttgc aactggatcc atttggatcc gggaaaaagaa tatgtcctgg 1320  
 48 cattacttca gcttatttca atttggatcc tggatgttgc aatcttattt atcattttaa 1380  
 49 ttggaaactg gcccgtggaa ttacacccatca aacacttgc atgactgaag ctattggcgg 1440  
 50 tgctctcagg aaaaaaaatggatcc atcttgcattt gtttgcattt ccatatcaag ttagcttgg 1500  
 51 ctccaaatattt tcttgcatttac atggggatcc tggatgttgc accgatcata taagtagcct 1560  
 52 atgttgcatttac atggggatcc tggatgttgc tggatgttgc accgatcata taagtagcct 1620  
 53 tcttgcatttac atggggatcc tggatgttgc tggatgttgc accgatcata taagtagcct 1680

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002  
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt  
Output Set: N:\CRF3\05222002\I909566B.raw

54 gattggatg gataataata aattgaaatg ttttctttt caaatccgaa aaa 1733  
 57 <210> SEQ ID NO: 2  
 58 <211> LENGTH: 500  
 59 <212> TYPE: PRT  
 60 <213> ORGANISM: Euphorbia lagascae  
 62 <400> SEQUENCE: 2  
 63 Met Glu Gln Lys Asn Leu Ser Phe Pro Ser Ile Leu Ile Ser Phe Leu  
 64 1 5 10 15  
 65 Leu Val Leu Ile Leu Val Val Met Arg Leu Trp Lys Lys Gln Asn  
 66 20 25 30  
 67 Pro Pro Pro Gly Pro Trp Lys Phe Pro Ile Ile Gly Asn Leu Pro His  
 68 35 40 45  
 69 Leu Leu Leu Thr Ser Asp Leu Gly His Glu Arg Phe Arg Ala Leu Ala  
 70 50 55 60  
 71 Gln Ile Tyr Gly Pro Val Met Ser Leu Gln Ile Gly Gln Val Ser Ala  
 72 65 70 75 80  
 73 Val Val Ile Ser Ser Ala Glu Ala Ala Lys Glu Val Met Lys Thr Gln  
 74 85 90 95  
 75 Ala Asp Ala Phe Ala Gln Arg Pro Ile Val Leu Asp Ala Gln Ile Val  
 76 100 105 110  
 77 Phe Tyr Asn Arg Lys Asp Val Leu Phe Ala Ser Tyr Gly Asp His Trp  
 78 115 120 125  
 79 Arg Gln Met Lys Lys Ile Trp Ile Leu Glu Phe Leu Ser Ala Lys Lys  
 80 130 135 140  
 81 Val Gln Ser Ser Arg Leu Ile Arg Glu Glu Met Glu Asp Ala Ile  
 82 145 150 155 160  
 83 Thr Phe Leu Arg Ser Lys Ala Gly Ser Pro Val Asn Ile Thr Lys Ile  
 84 165 170 175  
 85 Ile Tyr Gly Ile Ile Ser Ile Met Ile Arg Thr Ser Val Gly Asn  
 86 180 185 190  
 87 Cys Lys Gln Lys Glu Arg Leu Leu Ser Val Ala Asp Ala Val Asn Glu  
 88 195 200 205  
 89 Ala Ala Thr Ser Phe Gly Thr Ala Asp Ala Phe Pro Thr Trp Lys Leu  
 90 210 215 220  
 91 Leu His Tyr Ile Ile Gly Ala Glu Ser Lys Pro Arg Arg Leu His Gln  
 92 225 230 235 240  
 93 Glu Ile Asp Asp Ile Leu Glu Glu Ile Leu Asn Glu His Lys Ala Asn  
 94 245 250 255  
 95 Lys Pro Phe Glu Ala Asp Asn Leu Met Asp Val Leu Leu Asn Leu Gln  
 96 260 265 270  
 97 Lys Asn Gly Asn Val Pro Val Pro Val Thr Asn Glu Ser Ile Lys Ala  
 98 275 280 285  
 99 Ser Val Leu Gln Met Phe Thr Ala Gly Ser Glu Thr Thr Ser Lys Ala  
 100 290 295 300  
 101 Thr Glu Trp Val Met Ala Glu Leu Met Lys Asn Pro Thr Glu Leu Arg  
 102 305 310 315 320  
 103 Lys Ala Gln Glu Glu Val Arg Gln Val Phe Gly Glu Met Gly Lys Val  
 104 325 330 335  
 105 Asp Glu Ser Arg Phe His Asp Leu Lys Phe Phe Lys Leu Val Val Lys  
 106 340 345 350

RAW SEQUENCE LISTING DATE: 05/22/2002  
 PATENT APPLICATION: US/09/909,566B TIME: 11:28:29

Input Set : A:\bb1465.us.nacorrected.seq.lst.txt  
 Output Set: N:\CRF3\05222002\I909566B.raw

127	340	345	350	
129	Glu Thr Leu Arg Leu His Pro Pro Val Val Leu Ile Pro Arg Glu Cys			
130	355	360	365	
132	Arg Glu Thr Thr Arg Ile Asp Gly Tyr Glu Ile His Pro Asn Thr Arg			
133	370	375	380	
135	Ile Val Val Asn Ala Trp Ala Ile Gly Arg Asp Pro Asn Thr Trp Ser			
136	385	390	395	400
138	Glu Pro Gly Lys Phe Asn Pro Glu Arg Phe Lys Asp Cys Ala Ile Asp			
139	405	410	415	
141	Tyr Lys Gly Thr Thr Phe Glu Leu Val Pro Phe Gly Ala Gly Lys Arg			
142	420	425	430	
144	Ile Cys Pro Gly Ile Thr Ser Ala Ile Thr Asn Leu Glu Tyr Val Ile			
145	435	440	445	
147	Ile Asn Leu Leu Tyr His Phe Asn Trp Glu Leu Ala Asp Gly Ile Thr			
148	450	455	460	
150	Pro Gln Thr Leu Asp Met Thr Glu Ala Ile Gly Gly Ala Leu Arg Lys			
151	465	470	475	480
153	Lys Ile Asp Leu Lys Leu Ile Pro Ile Pro Tyr Gln Val Ser Leu Gly			
154	485	490	495	
156	Ser Asn Ile Ser			
157	500			
160	<210> SEQ ID NO: 3			
161	<211> LENGTH: 502			
162	<212> TYPE: PRT			
163	<213> ORGANISM: Capsicum annuum			
165	<400> SEQUENCE: 3			
166	Met Glu Ile Gln Phe Thr Asn Leu Val Ala Phe Leu Leu Phe Leu Ser			
167	1	5	10	15
169	Ser Ile Ile Leu Leu Leu Lys Lys Trp Lys Thr Gln Lys Leu Asn Leu			
170	20	25	30	
172	Pro Pro Gly Pro Trp Lys Leu Pro Phe Ile Gly Ser Leu His His Leu			
173	35	40	45	
175	Ala Val Ala Gly Pro Leu Pro His His Gly Leu Lys Asn Leu Ala Lys			
176	50	55	60	
178	Leu Tyr Gly Pro Leu Met His Leu Arg Leu Gly Glu Ile Pro Thr Val			
179	65	70	75	80
181	Ile Ile Ser Ser Pro Arg Met Ala Lys Glu Val Leu Lys Thr His Asp			
182	85	90	95	
184	Leu Ala Phe Ala Thr Arg Pro Lys Leu Val Val Ala Asp Ile Val His			
185	100	105	110	
187	Tyr Asp Ser Thr Asp Ile Ala Phe Ser Pro Tyr Gly Glu Tyr Trp Arg			
188	115	120	125	
190	Gln Ile Arg Lys Ile Cys Ile Leu Glu Leu Leu Ser Ala Lys Met Val			
191	130	135	140	
193	Lys Phe Phe Ser Ser Ile Arg Gln Asp Glu Leu Ser Met Met Val Ser			
194	145	150	155	160
196	Ser Ile Arg Thr Met Pro Asn Phe Pro Val Asn Leu Thr Asp Lys Ile			
197	165	170	175	
199	Phe Trp Phe Thr Ser Ser Val Thr Cys Arg Ser Ala Leu Gly Lys Ile			

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002  
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt  
Output Set: N:\CRF3\05222002\I909566B.raw

200 180 185 190  
 202 Cys Arg Asp Gln Asp Lys Leu Ile Ile Phe Met Arg Glu Ile Ile Ser  
 203 195 200 205  
 205 Leu Thr Gly Gly Phe Ser Ile Ala Asp Phe Phe Pro Thr Trp Lys Met  
 206 210 215 220  
 208 Leu His Asp Val Gly Gly Ser Lys Thr Arg Leu Leu Lys Ala His Arg  
 209 225 230 235 240  
 211 Lys Ile Asp Glu Ile Leu Glu His Val Val Asn Glu His Lys Gln Asn  
 212 245 250 255  
 214 Arg Ala Asp Gly Gln Lys Gly Asn Gly Glu Phe Gly Gly Glu Asp Leu  
 215 260 265 270  
 217 Ile Asp Val Leu Leu Arg Val Arg Glu Ser Gly Glu Val Gln Ile Ser  
 218 275 280 285  
 220 Ile Thr Asp Asp Asn Ile Lys Ser Ile Leu Val Asp Met Phe Ser Ala  
 221 290 295 300  
 223 Gly Ser Glu Thr Ser Ser Thr Thr Ile Ile Trp Ala Leu Ala Glu Met  
 224 305 310 315 320  
 226 Met Lys Lys Pro Ser Val Leu Ala Lys Ala Gln Ala Glu Val Arg Gln  
 227 325 330 335  
 229 Val Leu Lys Glu Lys Lys Gly Phe Gln Gln Ile Asp Leu Asp Glu Leu  
 230 340 345 350  
 232 Lys Tyr Leu Lys Leu Val Ile Lys Glu Thr Leu Arg Met His Pro Pro  
 233 355 360 365  
 235 Ile Pro Leu Leu Val Pro Arg Glu Cys Met Lys Asp Thr Lys Ile Asp  
 236 370 375 380  
 238 Gly Tyr Asn Ile Pro Phe Lys Thr Arg Val Ile Val Asn Ala Trp Ala  
 239 385 390 395 400  
 241 Ile Gly Arg Asp Pro Glu Ser Trp Asp Asp Pro Glu Ser Phe Ser Pro  
 242 405 410 415  
 244 Glu Arg Phe Glu Asn Ser Ser Val Asp Phe Leu Gly Ser His His Gln  
 245 420 425 430  
 247 Phe Ile Pro Phe Gly Ala Gly Arg Arg Ile Cys Pro Gly Met Leu Phe  
 248 435 440 445  
 250 Gly Leu Ala Asn Val Gly Gln Pro Leu Ala Gln Leu Leu Tyr His Phe  
 251 450 455 460  
 253 Asp Arg Lys Leu Pro Asn Gly Gln Ser His Glu Asn Leu Asp Met Thr  
 254 465 470 475 480  
 256 Glu Ser Pro Gly Ile Ser Ala Thr Arg Lys Asp Asp Leu Val Leu Ile  
 257 485 490 495  
 259 Ala Thr Pro Tyr Asp Pro  
 260 500  
 263 <210> SEQ ID NO: 4  
 264 <211> LENGTH: 51  
 265 <212> TYPE: DNA  
 266 <213> ORGANISM: artificial sequence  
 W--> 268 <220> FEATURE:  
 W--> 268 <223> OTHER INFORMATION:  
 268 <400> SEQUENCE: 4  
 269 tcaaggagaa aaaaccccg atccatggag cagaaaaatc tcttttcc g

51

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002  
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt  
Output Set: N:\CRF3\05222002\I909566B.raw

272 <210> SEQ ID NO: 5  
273 <211> LENGTH: 35  
274 <212> TYPE: DNA  
275 <213> ORGANISM: artificial sequence  
W--> 277 <220> FEATURE:  
W--> 277 <223> OTHER INFORMATION:  
277 <400> SEQUENCE: 5 35  
278 gcccaagtgaa ttgtataacg actcactata gggcg  
281 <210> SEQ ID NO: 6  
282 <211> LENGTH: 35  
283 <212> TYPE: DNA  
284 <213> ORGANISM: artificial sequence  
W--> 286 <220> FEATURE:  
W--> 286 <223> OTHER INFORMATION:  
286 <400> SEQUENCE: 6 35  
287 gcggccgcga attcgaaaaa tggagcagaa aaatc  
290 <210> SEQ ID NO: 7  
291 <211> LENGTH: 35  
292 <212> TYPE: DNA  
293 <213> ORGANISM: artificial sequence  
W--> 295 <220> FEATURE:  
W--> 295 <223> OTHER INFORMATION:  
295 <400> SEQUENCE: 7 35  
296 gcggccgcgg atccttagaa catcgtaat taaag

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/22/2002  
PATENT APPLICATION: US/09/909,566B TIME: 11:28:30

Input Set : A:\bb1465 us nacorrected seq 1st.txt  
Output Set: N:\CRF3\05222002\I909566B.raw

#### Use of <220> Feature (NEW RULES):

Use of <220> Feature and associated headings. Sequence(s) are missing the <220> Feature and associated headings. Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec.1.823 of new Rules)

Seq# : 4, 5, 6, 7

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002  
TIME: 11:28:30

Input Set : A:\bb1465 us nacorrected seq 1st.txt  
Output Set: N:\CRF3\05222002\I909566B.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:268 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:268 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:277 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:277 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:286 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:286 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:295 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:295 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION: